

**Fig. 1**

	I-ORF3-->			I-ORF2-->		
	5110v	5120v	5130v	5140v	5150v	5160v
-BURMA	TGAATGAATAACATGTCTTTTGTGCGCCCATGGGTTTCGCGACCATGCGCCCTCGGCCT					
	GAATGAATAACATGT TTTGCTGCGCCCATGGGTTTCGC ACCATGCGCCCT GGCCT					
-MEXICO	CTGAATGAATAACATGTGGTTTGTGCGCCCATGGGTTTCGCCACCATGCGCCCTAGGCCT					
	5170v	5180v	5190v	5200v	5210v	5220v
-BURMA	ATTTTGTGCTGCTCCTCATGTTTTTGCCTATGCTGCCCCGCGCCACCGCCCGGTCAGCCG					
	TTTTG TG TG TCCTC TGTTT TGCCTATG TGCCCCGCGCCACCG CCGGTCAGCCG					
-MEXICO	CTTTTGTGCTGTTGTTCTCTTGTCTTCTGCCTATGTTGCCCGCGCCACCGACCGGTCAGCCG					
	5230v	5240v	5250v	5260v	5270v	5280v
-BURMA	TCTGGCCGCGCGTCGTGGGCGGCGCAGCGCGGTTCCGGCGGTGGTTTCTGGGGTGACCCG					
	TCTGGCCGCGCGTCGTGGGCGGCGCAGCGCGGTT CCGGCGGTGGTTTCTGGGGTGACCCG					
-MEXICO	TCTGGCCGCGCGTCGTGGGCGGCGCAGCGCGGTACCGGCGGTGGTTTCTGGGGTGACCCG					
	5290v	5300v	5310v	5320v	5330v	5340v
-BURMA	GTTGATTCTCAGCCCTTCGCAATCCCCTATATTTCATCCAACCAACCCCTTCGCCCCCGAT					
	GTTGATTCTCAGCCCTTCGCAATCCCCTATATTTCATCCAACCAACCCCTT GCCCC GA					
-MEXICO	GTTGATTCTCAGCCCTTCGCAATCCCCTATATTTCATCCAACCAACCCCTTTCGCCCCAGAC					
	I-406.4-2-->					
	5350v	5360v	5370v	5380v	5390v	5400v
-BURMA	GTCACCGCTGCGGCGGGGCTGGACCTCGTGTTTCGCCAACCCGCCCCGACCACTCGGCTCC					
	GT CCGCTGCG CCGGG CTGGACCTCG TTCCGCCAACC GCCCC CCACT GGCTCC					
-MEXICO	GTTGCCGCTGCGTCCGGGTCTGGACCTCGCCTTCGCCAACCAGCCCCGCCACTTGGCTCC					
	5410v	5420v	5430v	5440v	5450v	5460v
-BURMA	GCTTGGCGTGACCAGGCCCCAGCGCCCCCGCGTTGCCTCACGTCGTAGACCTACCACAGCT					
	CTTGGCG GA CAGGCCCCAGCGCCCC CCG TGCCTC CGTCG GACCT CCACAGC					
-MEXICO	ACTTGGCGAGATCAGGCCCCAGCGCCCCCTCCGCTGCCTCCCGTCGCCGACCTGCCACAGCC					
	<--406.4-2-I					
	<-ORF3--I					
	5470v	5480v	5490v	5500v	5510v	5520v
-BURMA	GGGGCCGCGCGCTAACCGCGGTTCGCTCCGGCCCATGACACCCCGCCAGTGCCCTGATGTC					
	GGGGC GCG CGCT AC GC GT GC CC GCCCATGACACC C CC GT CC GA GT					
-MEXICO	GGGGCTGCGGCGCTGACGGCTGTGGCGCCTGCCCATGACACCTCACCCGTCGCCGACGTT					
	5530v	5540v	5550v	5560v	5570v	5580v
-BURMA	GACTCCCGCGGCGCCATCTTGCGCCGCGAGTATAACCTATCAACATCTCCCTTACCTCT					
	GA TC CGCGG GC AT T CGCCG CAGTATAA T TC AC TC CCCCT AC TC					
-MEXICO	GATTCFCGCGGTGCAATTCTACGCCGCGAGTATAATTTGTCTACTTCACCCCTGACATCC					
	5590v	5600v	5610v	5620v	5630v	5640v
-BURMA	TCCGTGGCCACCGGCACTAACCTGGTTCTTTATGCCGCCCCCTCTTAGTCCGCTTTTACCC					
	TC GTGGCC C GGCATAA T GT CT TATGC GCCCC CTTA TCCGC T T CC					
-MEXICO	TCTGTGGCCTCTGGCACTAATTTAGTCTGTATGCAGCCCCCTTAATCCGCCTCTGCCG					

Fig. 2A

	5650v	5660v	5670v	5680v	5690v	5700v
-BURMA	CITTCAGGACGGCACCAATACCCATATAATGGCCACGGAAGCTTCTAATTATGCCCAGTAC					
-MEXICO	CT CAGGACGG AC AATAC CA AT ATGGCCAC GA GC TC AATTATGC CAGTAC					
	5710v	5720v	5730v	5740v	5750v	5760v
-BURMA	CGGGTTGCCCCGTGCCACAATCCGTTACCGCCCGCTGGTCCCCAATGCTGTGGCGGTTAC					
-MEXICO	CGGGTTGCCCCG GC AC ATCCGTTACCG CC CT GT CC AATGC GT GG GG TA					
					trpE- (C2) I->	
	5770v	5780v	5790v	5800v	5810v	5820v
-BURMA	GCCATCTCCATCTCATTCTGGCCACAGACCACCACCACCCCGACGTCCGTTGATATGAAT					
-MEXICO	GCTATATCCATTTCTTTCTGGCCTCAAACAACCACAACCCCTACATCTGTTGACATGAAT					
	5830v	5840v	5850v	5860v	5870v	5880v
-BURMA	TCAATAACCTCGACGGATGTTCTGTTATTTTAGTCCAGCCCGGCATAGCCTCTGAGCTTGTG					
-MEXICO	TC AT AC TC AC GATGT G ATT T GT CA CC GGCATAGC TCTGA T GT					
	5890v	5900v	5910v	5920v	5930v	5940v
-BURMA	ATCCCAAGTGAGCGCCTACACTATCGTAACCAAGGCTGGCGCTCCGTCGAGACCTCTGGG					
-MEXICO	ATCCCAAG GAGCGCCT CACTA CG AA CAAGG TGGCGCTC GT GAGAC TCTGG					
	5950v	5960v	5970v	5980v	5990v	6000v
-BURMA	GTGGCTGAGGAGGAGGCTACCTCTGGTCTTGTATGCTTTGCATACATGGCTCACTCGTA					
-MEXICO	GT GCTGAGGAGGA GC ACCTC GGTCTTGT ATG T TGCATACATGGCTC C GT					
	6010v	6020v	6030v	6040v	6050v	6060v
-BURMA	AATTCCTATACTAATACACCCCTATACCGGTGCCCTCCGGCTGTITGGACTTTGCCCTTGAG					
-MEXICO	AA TCCTATAC AATAC CC TATACCGGTGCCCT GG T TGGACTTTGCC T GAG					
	6070v	6080v	6090v	6100v	6110v	6120v
-BURMA	CTTGAGTTTCGCAACCTTACCCCCGGTAACACCAATACGCGGGTCTCCCGTTATTCCAGC					
-MEXICO	CTTGAGTTTCGCAA CT ACC CC GTAACACCAATAC CG GT TCCCGTTA TCCAGC					
			I-SG3-->			
	6130v	6140v	6150v	6160v	6170v	6180v
-BURMA	ACTGCTCGCCACCGCCTTCGTGCGGTGCGGACGGGACTGCGGAGCTCACCACCACGGCT					
-MEXICO	ACTGCTCG CAC C CG G G GACGGGACTGC GAGCT ACCAC AC GC					
	ACTGCTCGTCACTCCGCCCCGAGGGGCC---GACGGGACTGCGGAGCTGACCACAACCTGCA					

Fig. 2B

	6190v	6200v	6210v	6220v	6230v	6240v
-BURMA	GCTACCCGCTTTATGAAGGACCTCTATTTTACTAGTACTAATGGTGTGCGGTGAGATCGGC					
	GC ACC G TT ATGAA GA CTC A TTTAC G TAATGG GT GGTGA TCGGC					
-MEXICO	GCCACCAGGTTTCATGAAAGATCTCCACTTTACCGGCTTAATGGGGTAGGTGAAGTCGGC					
	6250v	6260v	6270v	6280v	6290v	6300v
-BURMA	CGCGGGATAGCCCTCACCCCTGTTCAACCTTGCTGACACTCTGCTTGGCGGCCTGCCGACA					
	CGCGGGATAGC CT AC T T AACCTTGCTGACAC CT CT GGCGG CT CCGACA					
-MEXICO	CGCGGGATAGCTCTAACATTACTTAACCTTGCTGACACGCTCCTCGGCGGGCTCCCGACA					
	6310v	6320v	6330v	6340v	6350v	6360v
-BURMA	GAATTGATTTTCGTCGGCTGGTGGCCAGCTGTTTCTACTCCCGTCCCGTTGTCTCAGCCAAT					
	GAATT ATTTTCGTTCGGCTGG GG CA CTGTT TA TCCCG CC GTTGTCTCAGCCAAT					
-MEXICO	GAATTAATTTTCGTTCGGCTGGCGGGCAACTGTTTTATTCCCGCCCGTTGTCTCAGCCAAT					
	6370v	6380v	6390v	6400v	6410v	6420v
-BURMA	GGCGAGCCGACTGTTAAGTTGTATACATCTGTAGAGAATGCTCAGCAGGATAAGGGTATT					
	GGCGAGCC AC GT AAG T TATACATC GT GAGAATGCTCAGCAGGATAAGGGT TT					
-MEXICO	GGCGAGCCAACCGTGAAGCTCTATACATCAGTGGAGAATGCTCAGCAGGATAAGGGTGT					
	6430v	6440v	6450v	6460v	6470v	6480v
-BURMA	GCAATCCCGCATGACATTGACCTCGGAGAATCTCGTGTGGTTATTTCAGGATTATGATAAC					
	GC ATCCC CA GA AT GA CT GG GA TC CGTGTGGT ATTCAGGATTATGA AAC					
-MEXICO	GCTATCCCCCACGATATCGATCTTGGTGATTTCGGTGTGGTCAATTCAGGATTATGACAAC					
	6490v	6500v	6510v	6520v	6530v	6540v
-BURMA	CAACATGAACAAGATCGGCGGACGCCITCTCCAGCCCCATCGCGCCCTTTCTCTGTCCCTT					
	CA CATGA CA GATCGGCC AC CC TC CC GC CCATC CG CCTTT TCTGT CT					
-MEXICO	CAGCATGAGCAGGATCGGCCCCACCCCGTCCGCTGCGCCATCTCGGCCCTTTTCTGTCTCT					
	6550v	6560v	6570v	6580v	6590v	6600v
-BURMA	CGAGCTAATGATGTGCTTTGGCTCTCTCTACCGCTGCCGAGTATGACCAGTCCACTTAT					
	CGAGC AATGATGT CTTTGGCT TC CTCAC GC GCCGAGTATGACCAGTCCACTTA					
-MEXICO	CGAGCAAATGATGTACTTTGGCTGTCCCTCACTGCAGCCGAGTATGACCAGTCCACTTAC					
	6610v	6620v	6630v	6640v	6650v	6660v
-BURMA	GGCTCTTCGACTGGCCAGTTTATGTTTCTGACTCTGTGACCTTGGTTAATGTTGCGACC					
	GG TC TC ACTGGCCC GTTTAT T TC GAC GTGAC TTGGT AATGTTGCGAC					
-MEXICO	GGGTCGTCAACTGGCCCGGTTTATATCTCGGACAGCGTGACTTTGGTGAATGTTGCGACT					
	6670v	6680v	6690v	6700v	6710v	6720v
-BURMA	GGCGCGCAGGCCGTTGCCCGGTGCTCGATTGGACCAAGGTCACACTTGACCGTCCGCCCC					
	GGCGCGCAGGCCGT GCCCG TCGCT GA TGG CCAA GTCAC CT GACGG CG CCC					
-MEXICO	GGCGCGCAGGCCGTAGCCCGATCGCTTGACTGGTCCAAAGTCACCCTCGACGGGCGGCCC					
	6730v	6740v	6750v	6760v	6770v	6780v
-BURMA	CTCTCCACCATCCAGCAGTACTCGAAGACCTTCTTTGTCTGCGCTCCGCGGTAAGCTC					
	CTC C AC T AGCA TA TC AAGAC TTCTTTGT CT CC CT CG GG AAGCTC					
-MEXICO	CTCCCGACTGTTGAGCAATATTCCAAGACATTCTTTGTGCTCCCCCTTCGTGGCAAGCTC					

Fig. 2C

6790v 6800v 6810v 6820v 6830v 6840v  
-BURMA TCCTTCTGGGAGGCAGGCACAACCTAAAGCCGGGTACCCCTTATAATTATAACACCACTGCT  
TC TT TGGGAGGC GGCACAAC AAAGC GG TA CCTTATAATTATAA AC ACTGCT  
-MEXICO TCCCTTTTGGGAGGCCCGGCACAACAAAGCAGGTTATCCTTATAATTATAATACTACTGCT

6850v 6860v 6870v 6880v 6890v 6900v  
-BURMA AGCGACCAACTGCTTGTGCGAGAATGCCCGCCGGGCACCGGGTCGCTATTTCCACTTACACC  
AG GACCA T CT T GA AATGC GCCGG CA CGGGTCGC ATTTT AC TA ACC  
-MEXICO AGTGACCAGATTCTGATTGAAAATGCTGCCCGCCATCGGGTCGCCATTTCAACCTATACC

6910v 6920v 6930v 6940v 6950v 6960v  
-BURMA ACTAGCCTGGGTGCTGGTCCCGTCTCCATTTCTGCGGTTGCCGTTTTAGCCCCCACTCT  
AC AG CT GG GC GTCC GTC CCATTTCTGCGG GC GTTTT GC CC C CTC  
-MEXICO ACCAGGCTTGGGGCCCGTCCGGTCGCCATTTCTGCGGCCGCGGTTTTGGCTCCACGCTCC

I-406.3-2-->  
6970v 6980v 6990v 7000v 7010v 7020v  
-BURMA GCGCTAGCATTCCTTGAGGATACCTTGGACTACCCCTGCCCGCGCCCATACCTTTTGATGAT  
GC CT GC TGCT GAGGATAC TT GA TA CC G CG GC CA AC TTTGATGA  
-MEXICO GCCCTGGCTCTGCTGGAGGATACTTTTGATTATCCGGGGCGGGCGCACACATTTGATGAC

7030v 7040v 7050v 7060v 7070v 7080v  
-BURMA TTCTGCCCAGAGTGCCGCCCCCTTGGCCTTCAGGGCTGCGCTTTCCAGTCTACTGTGCT  
TTCTGCCC GA TGCCGC C T GGCCT CAGGG TG GCTTTCCAGTC ACTGTGCT  
-MEXICO TTCTGCCCTGAATGCCGCGCTTTAGGCCTCCAGGGTTGTGCTTTCCAGTCAACTGTGCT

<--SG3-I  
<--406.3-2-I  
7090v 7100v 7110v 7120v 7130v 7140v  
-BURMA GAGCTTCAGCGCCTTAAGATGAAGTGGGTAAAACTCGGGAGTTGTAGTTTATTTGCTTG  
GAGCT CAGCGCCTTAA T AAGGTGGGTAAAACTCGGGAGTTGTAGTTTATTTG TG  
-MEXICO GAGCTCCAGCGCCTTAAAGTTAAGTGGGTAAAACTCGGGAGTTGTAGTTTATTTGGCTG

7150v 7160v 7170v 7180v 7190v  
-BURMA TGCCCCCTTCTTTCTGTTGC-----TTATTTCTCATTTCTGCGTTCCGCGCTCCC  
TGCCC CCT CTT TGC TTATTTT TTTCT GT CCGCGCTCCC  
-MEXICO TGCCACCTACTATATCTGCTGATTTCCCTTTATTTCTTTTCTCGGTCCCGCGCTCCC

<-I ORF2 <-I trpE-C2  
v 7195  
-BURMA TGA  
TGA  
-MEXICO TGA

Fig. 2D

	10	20	30	40	50	60
HEV (B)	MNNMSFAAPMGSRPCALGLFCCCSCFCLCCPRHRPVSRLAAVVGAAAVPAVVS	GTGL				
	X::: ::					
HEV (M)	MNNMWFAAPMGSPPCALGLFCCCSCFCLCCPRHRPVSRLAAVVGAAAVPAVVS	GTGL				
	10	20	30	40	50	60

		406.4-2			
	70	80	90	100	110
HEV (B)	ILSPSQSPIFIQPTSPPEMSPLRPGLDLVFANPPDHSAPLGVTRPSAPPLPHVVDLPQLG				
	::::::::::::: :.	::::::::::::: :	::::	::::::::::::: :	:
HEV (M)	ILSPSQSPIFIQPTPLPQTLPLRPGLDLAFANQPGHLAPLGEIRPSAPPLPPVADLPQPG				
	70	80	90	100	110

HEV (B)	PRRZ
	::X
HEV (M)	LRRZ

Fig. 3

	10	20	30	40	50	60
HEV (B)	MRPRPILLLLLMFLPMLPAPPPGQPSGRRRGRRSGGSGGGFWGDRVDSQPFAIPYIHPTN					
	X::					
HEV (M)	MRPRPILLLFLFLPMLPAPPTGQPSGRRRGRRSGGTGGGFWGDRVDSQPFAIPYIHPTN					
	10	20	30	40	50	60

				62K	
	70	80	90	100	110
HEV (B)	PFAPDVTAAAGAGPRVRQPARPLGSAWRDQAQRPAVASRRRPTTAGAAPLTAVAPAHDTF				
	::				
HEV (M)	PFAPDVAAASGSGPRLRQPARPLGSTWRDQAQRPSAASRRRPATAGAAALTAVAPAHDTF				
	70	80	90	100	110

	130	140	150	160	170
HEV (B)	PVPDVSRRGAILRRQYNLSTSPILTSSVATGTNLVLYAAPLSPLLPLQDGTINTHIMATEAS				
	::				
HEV (M)	PVPDVSRRGAILRRQYNLSTSPILTSSVASGTNLVLYAAPLNPPPLPLQDGTINTHIMATEAS				
	130	140	150	160	170

			C-2		
	190	200	210	220	230
HEV (B)	NYAQYRVARATIRYRPLVPNAVGGYAISISFWPQTTTTPTSVDMNSITSTDVRILVQPGI				
	::				
HEV (M)	NYAQYRVARATIRYRPLVPNAVGGYAISISFWPQTTTTPTSVDMNSITSTDVRILVQPGI				
	190	200	210	220	230

	250	260	270	280	290
HEV (B)	ASELVIPSERLHYRNQGWSVETSGVAEEEEATSGLVMLCIHGSLVNSYNTNTPYTGA LGLL				
	::				
HEV (M)	ASELVIPSERLHYRNQGWSVETSGVAEEEEATSGLVMLCIHGSPVNSYNTNTPYTGA LGLL				
	250	260	270	280	290

			SG3		
	310	320	330	340	350
HEV (B)	DFALELEFRNLTPGNTINTRVSRYSSTARHRLRRGADGTAE LTTTAATRFMKDLYFTSTNG				
	::				
HEV (M)	DFALELEFRNLITCNINTRVSRYSSTARHS-ARGADGTAE LTTTAATRFMKDLHFTGLNG				
	310	320	330	340	350

	370	380	390	400	410
HEV (B)	VGEIGRGIALTLFNLADTLTGGLPTELISSAGGQLFYSRPVVSANGEPTVKLYTSVENAQ				
	::				
HEV (M)	VGEVGRGIALTLINLADTLTGGLPTELISSAGGQLFYSRPVVSANGEPTVKLYTSVENAQ				
	360	370	380	390	410

	430	440	450	460	470
HEV (B)	QDKGIAIPHDIDLGESRVVIQDYDNQHEQDRPTPSPAPSRPF SVLRANDVLWLSLTAAEY				
	::				
HEV (M)	QDKGVAIPHDIDLGDSRVVIQDYDNQHEQDRPTPSPAPSRPF SVLRANDVLWLSLTAAEY				
	420	430	440	450	470

**Fig. 4A**

```

          490      500      510      520      530      540
HEV (B)  DQSTYGSSTGPVYVSDSVTLVNVATGAQAVARSLDWTKVTL DGRPLSTIQQYSKTFFVLP
          .....
HEV (M)  DQSTYGSSTGPVYISDSVTILVNVATGAQAVARSLDWSKVTL DGRPLPTVEQYSKTFFVLP
          480      490      500      510      520      530

```

```

          550      560      570      580      590      600
HEV (B)  LRGKLSFWEAGITTKAGYPYNYNTTASDQLLVENAAGHRVAISTYTTSLGAGPVSISAVAV
          .....
HEV (M)  LRGKLSFWEAGITTKAGYPYNYNTTASDQILIENAAGHRVAISTYTTTLGAGPVAISAAAV
          540      550      560      570      580      590

```

```

          406.3-2
          610      620      630      640      650
HEV (B)  LAPHSALALLEDTLDYPARAHTFDDFCPECRPLGLQGCAFOSTVAELQRLKVMVGKTR
          .....
HEV (M)  LAPRALALLEDTFDYPGRAHTFDDFCPECRALGLQGCAFOSTVAELQRLKVKVGKTR
          600      610      620      630      640      650

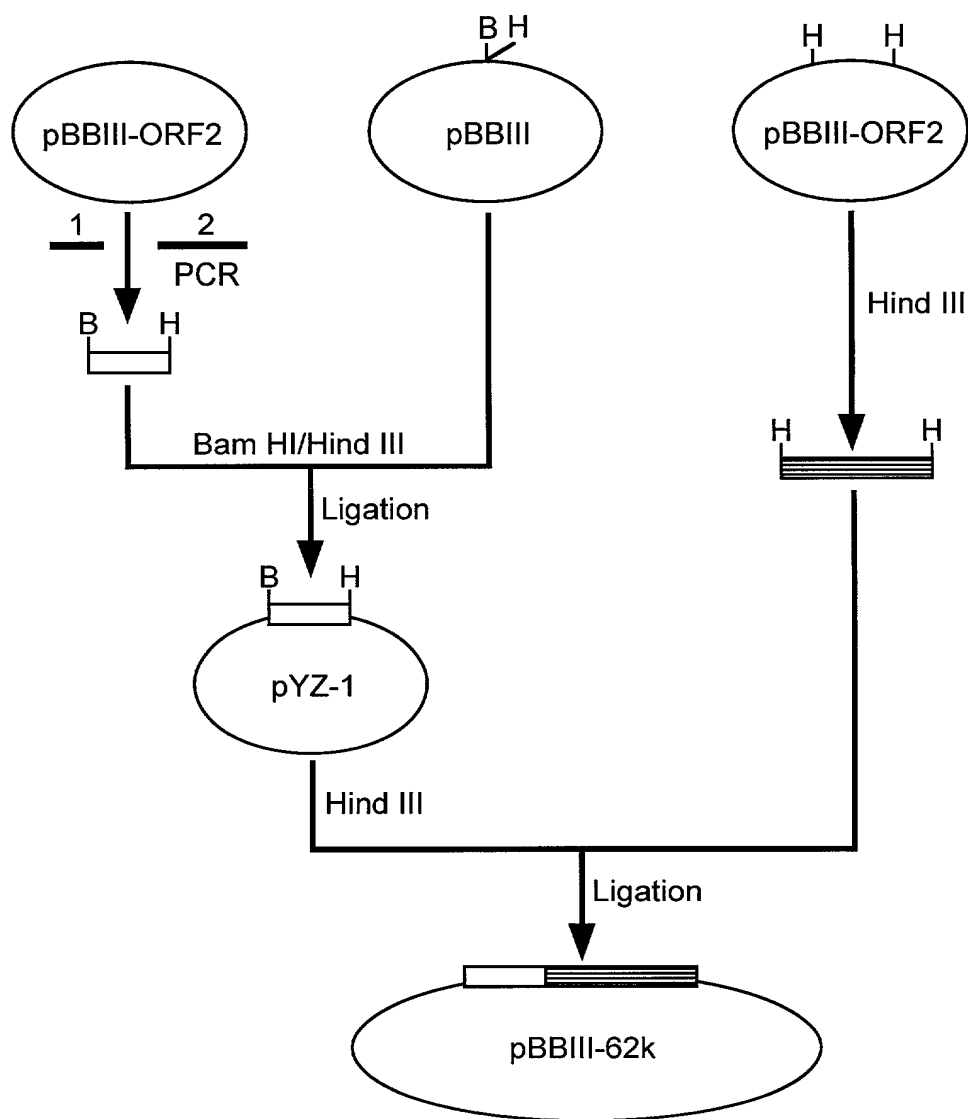
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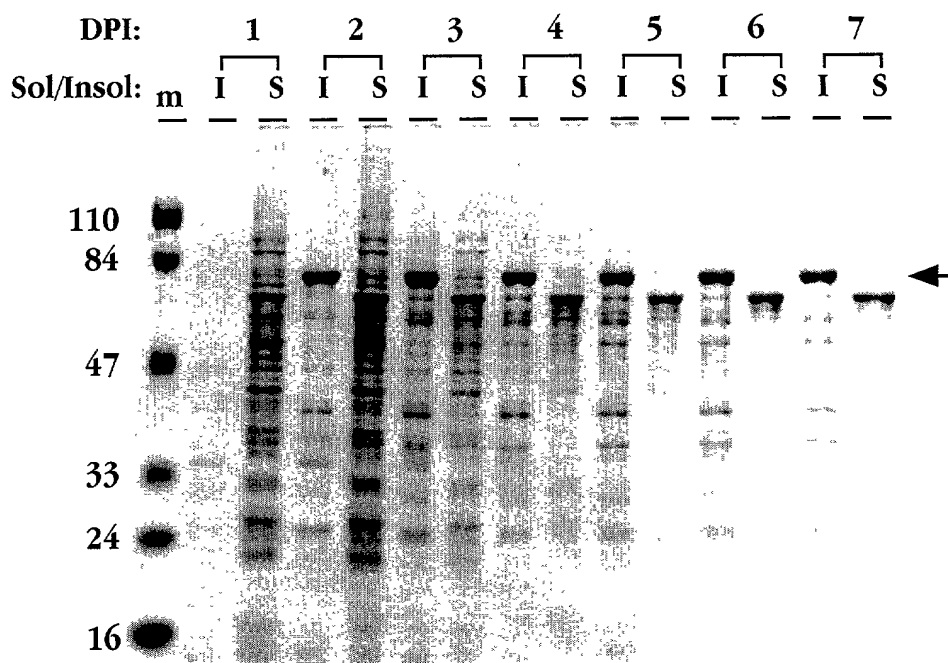
HEV (B)  ELZ
          :::
HEV (M)  ELZ

```

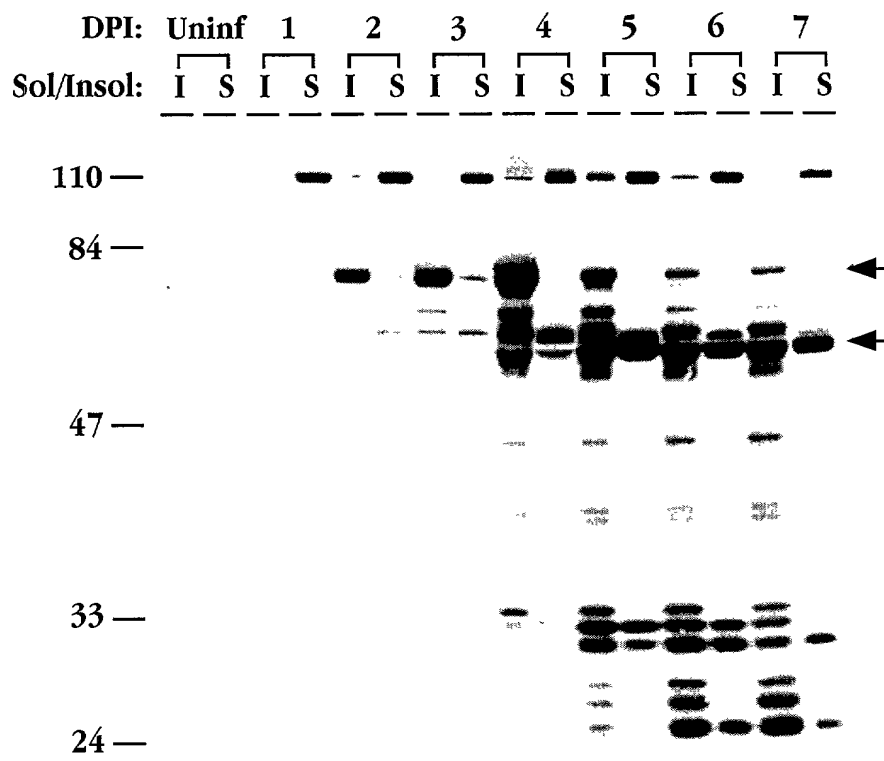
**Fig. 4B**



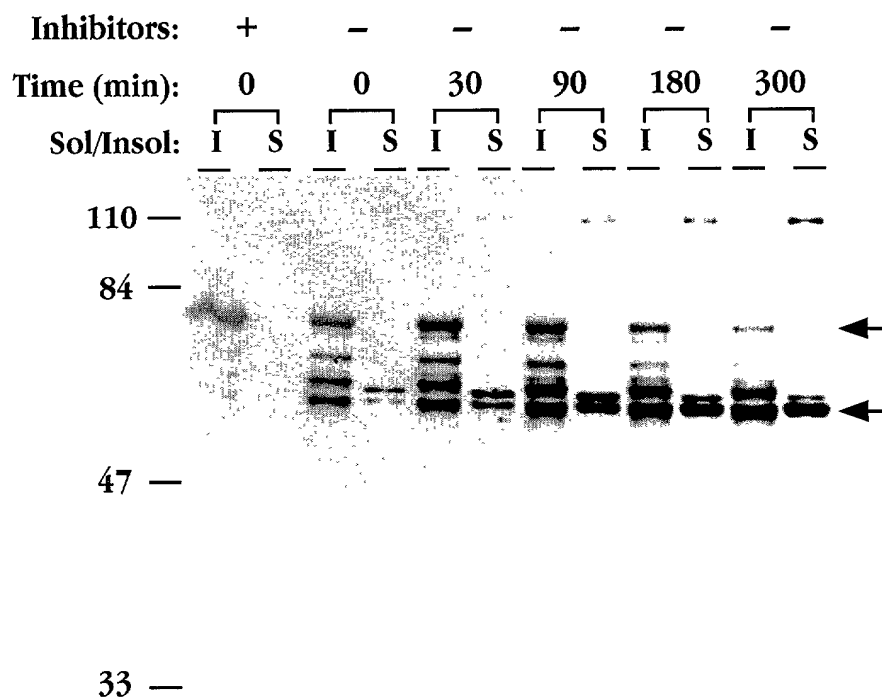
**Fig. 5**



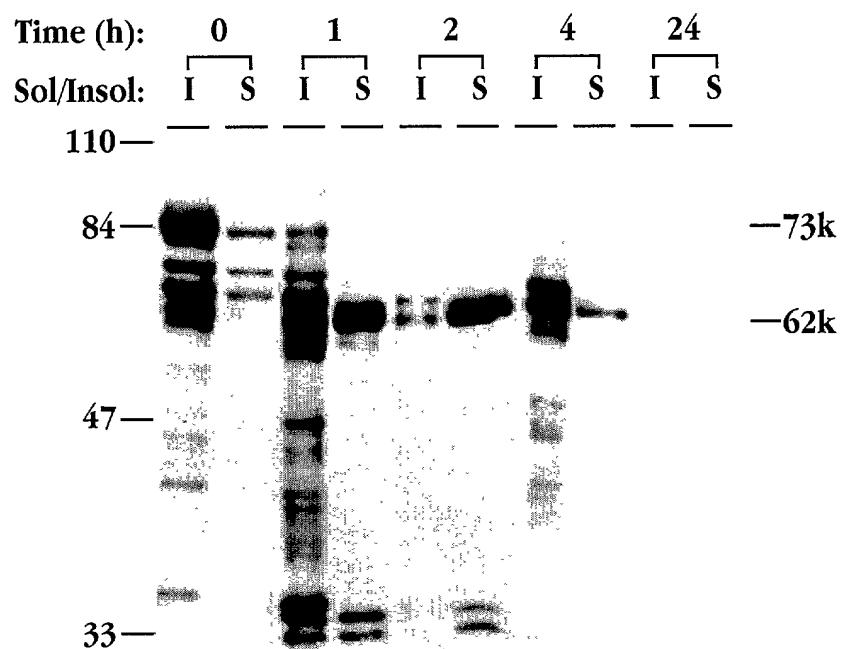
**Fig. 6A**



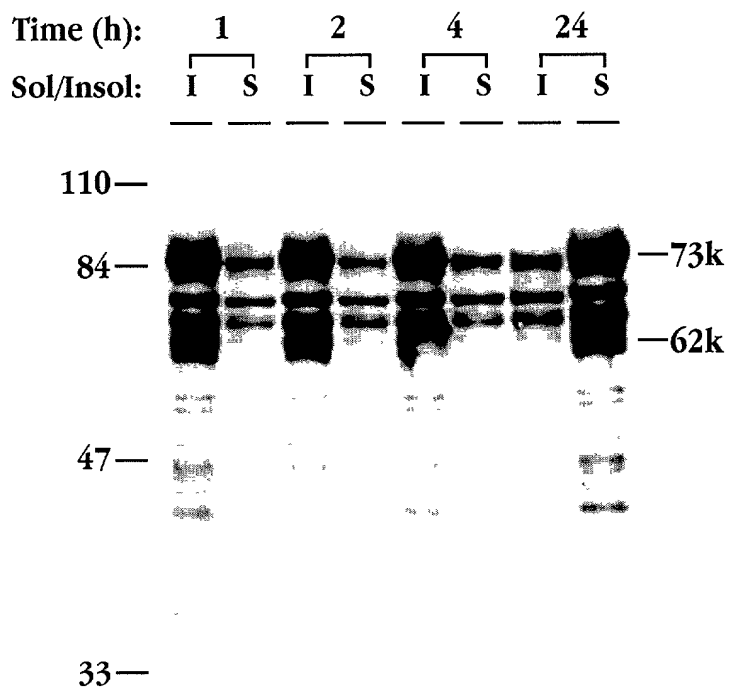
**Fig. 6B**



**Fig. 7**

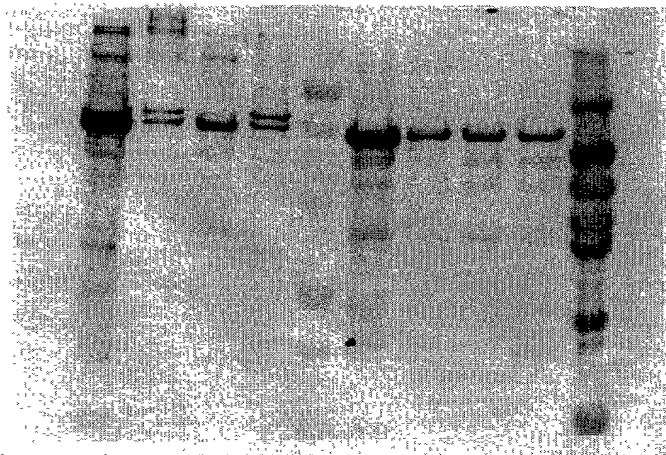


**Fig. 8A**



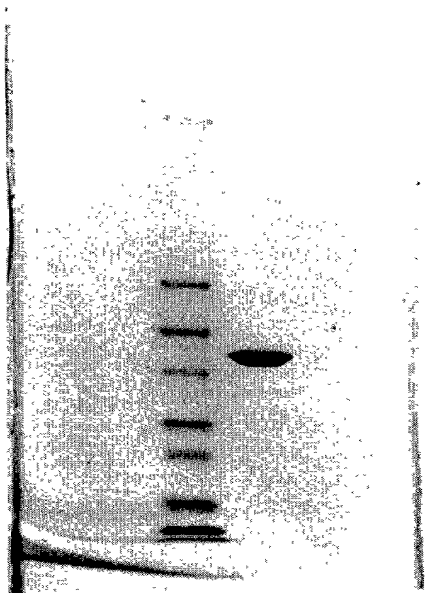
**Fig. 8B**

1 2 3 4 5 6 7 8 9 10



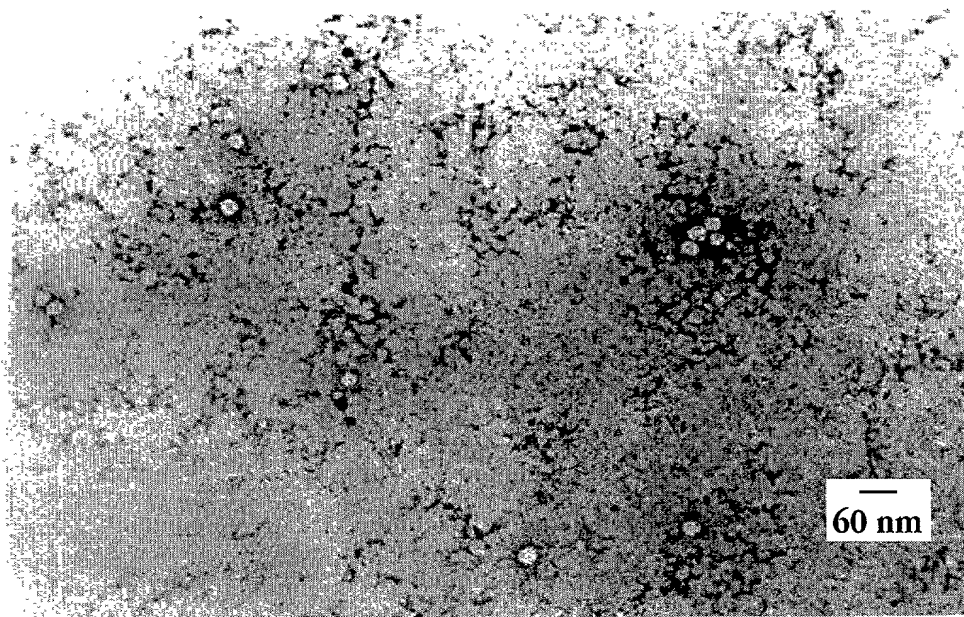
**Fig. 9**

1 2

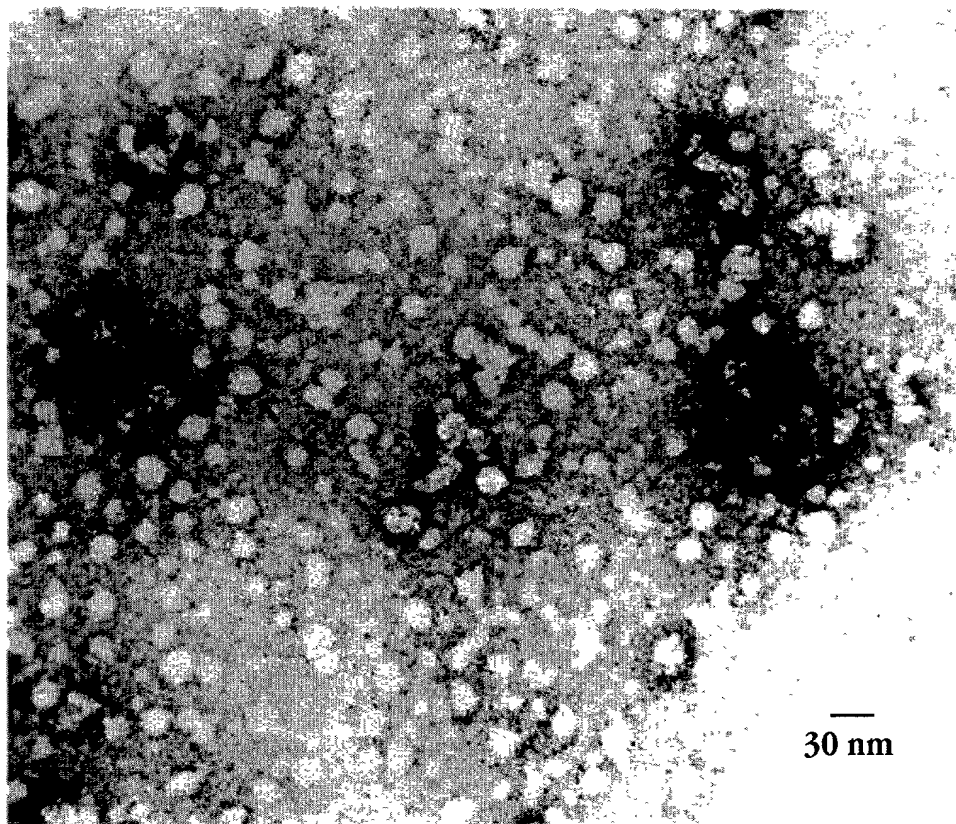


**SDS-PAGE**

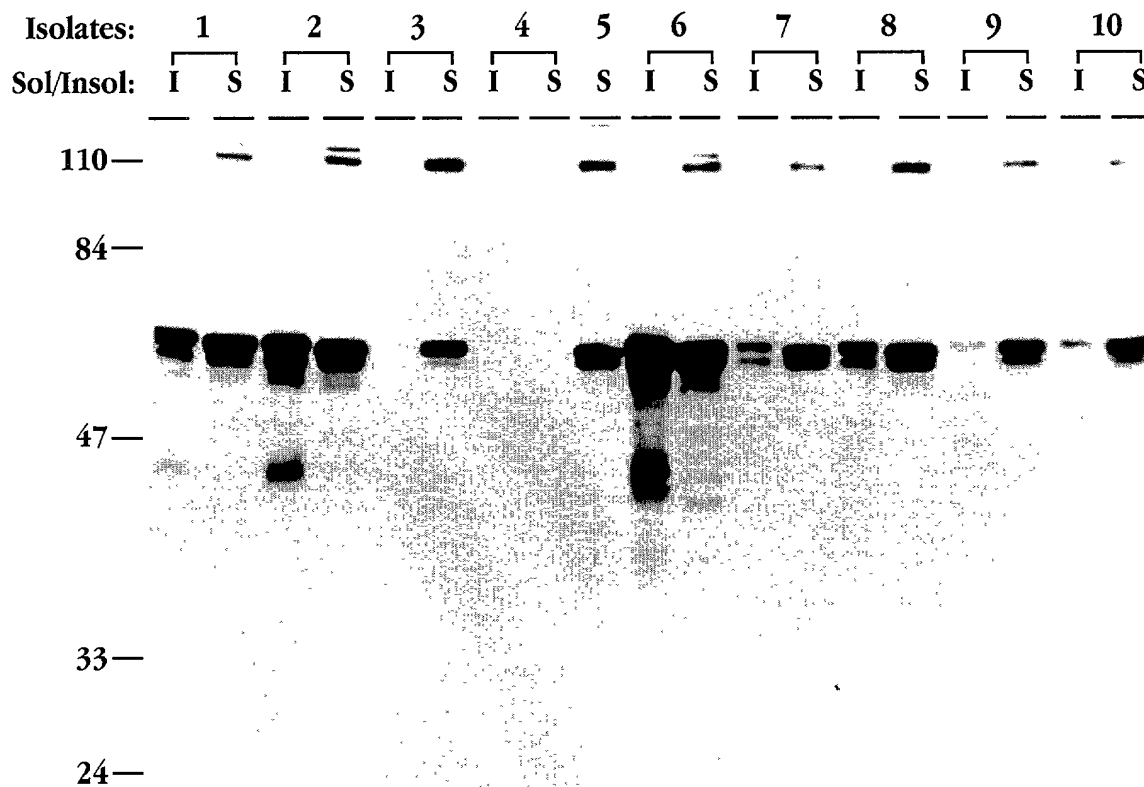
**Fig. 10**



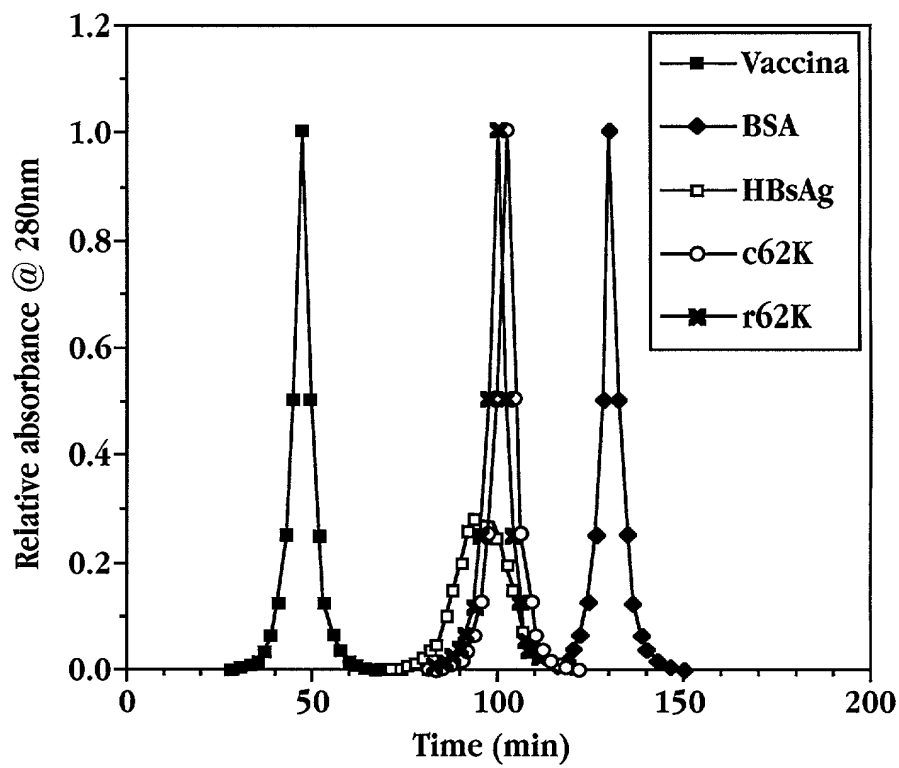
**Fig. 11A**



**Fig. 11B**



**Fig. 12**

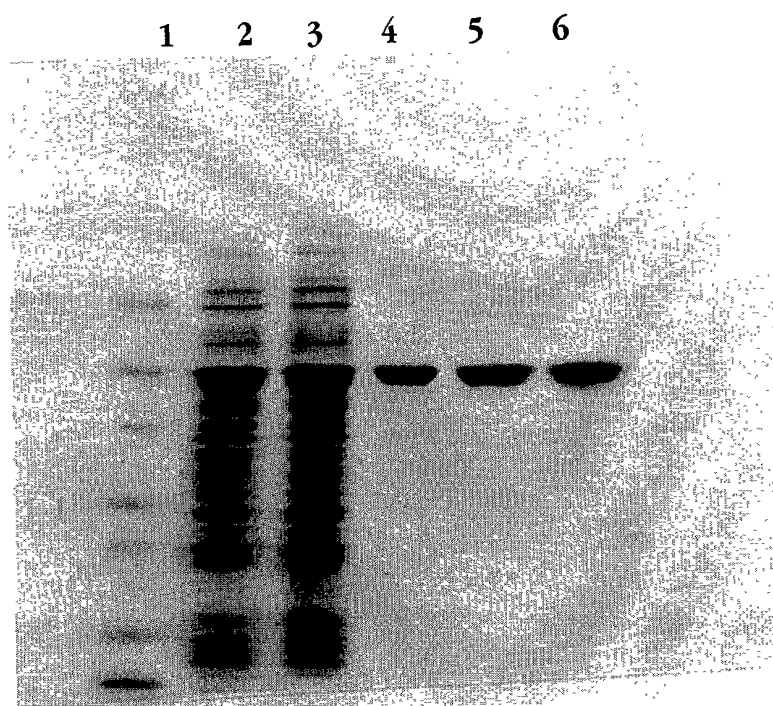


**Fig. 13**

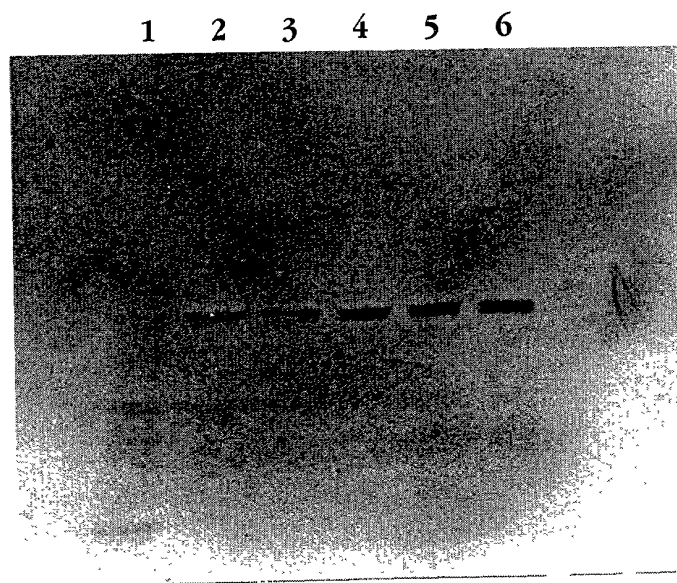
	10	20	30
MEXICAN (SEQ ID NO:18)	ANQPGHLAPLGEIRPSAPPLPPVADLPQPGLRR		
BURMA (SEQ ID NO:17)	ANPPDHSAPLGVTRPSAPPLPHVVDLPQLGPRR		
	10	20	30

**Fig. 16**

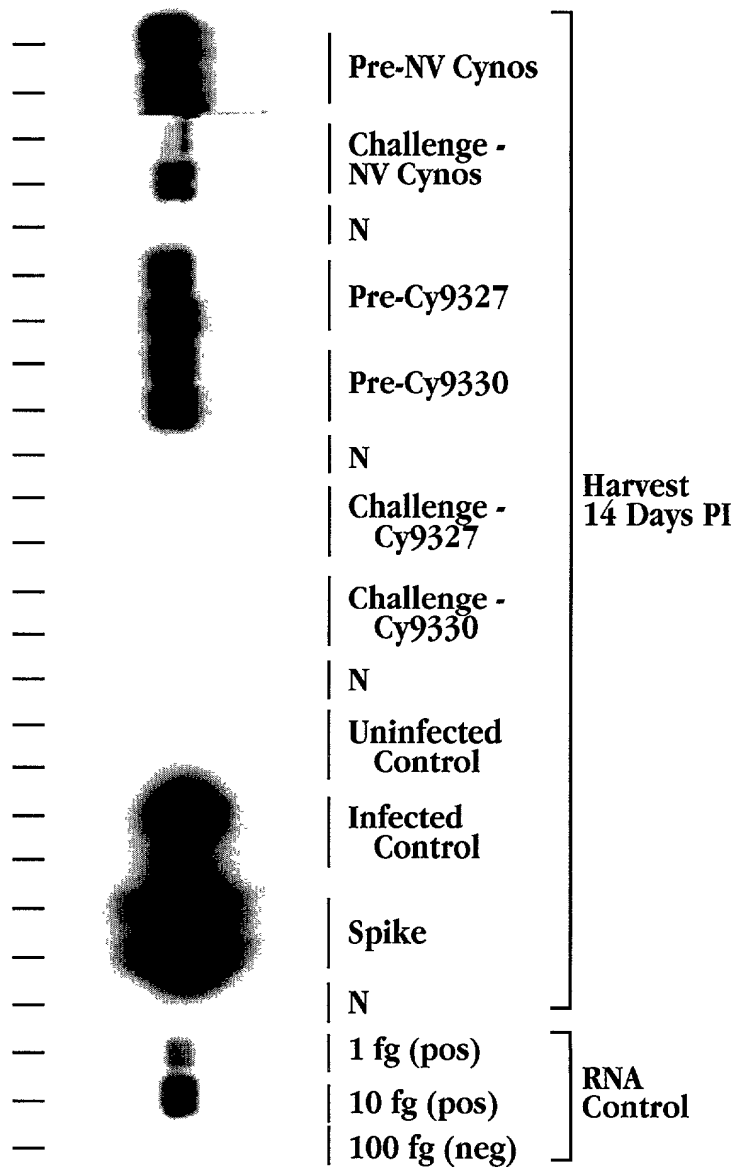
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**Fig. 14A**



**Fig. 14B**



**Fig. 15**